

REMARKS/ARGUMENTS

Claims 1, 2, 4, and 5 were rejected under 35 U.S.C. §103(a) as being unpatentable over Komatsu et al., JP 60052533 A, in view of Noda et al., U.S. Patent No. 5,009,707, Fujimoto et al., U.S. Patent No. 4,871,393, and Feichtner et al., U.S. Patent No. 4,410,355. Reconsideration of the rejection is respectfully requested.

Independent claim 1 has been amended to provide, in part, for, “[a] process for producing a raw mixture for sintering, comprising ... adding some of the returned sintered material before the granulation process, and after the ore has been mixed with the at least one addition and optionally with the binder, and further comprising adding some of the returned sintered material alone within a longitudinal extent of a granulation drum during the granulation process, ...” Antecedent basis for the amendment to independent claim 1 is found in the specification, for example, on page 3, lines 17-19.

In support of the rejection, the Examiner contends that, “Komatsu does not specifically teach that some of the returned sintered material is added ‘within a longitudinal extent of a granulation drum’ during the granulation process. Noda teaches a method for manufacturing agglomerates of sintered pellets, wherein agglomerates of less than 4 mm in particle size are returned to the primary disk pelletizer and repeatedly pelletized (col. 3, lines 23-27). Noda also teaches that the returns are fed directly into the pelletizer (Fig. 1). It would have been obvious to one of ordinary skill in the art at the time of the invention to add the returned ore of Komatsu directly into the pelletizer, as taught by Noda, because it is a known method of returning ‘unfinished’ product to a pelletizer,” (Office Action, page 3, lines 7-16).

Applicants respectfully disagree with the analysis of the Examiner.

First, it should be noted that column 3, lines 23-27, of Noda et al. refer to primary agglomerates of less than 4 mm in particle size being returned to the primary disk pelletizer 8 and repeatedly pelletized, the primary agglomerates being pelletized by the primary disk pelletizer 8 before being sieved with screen 9a of 4 mm in mesh. Thus, all the cited portion of Noda et al. teaches is the return of pelletized particles of a certain particle size repeatedly to a pelletizer that pelletized them. It is respectfully submitted that this portion of Noda et al. does not teach, disclose, or suggest the addition of “some of the returned sintered material alone within a

longitudinal extent of a granulation drum during the granulation process,” (emphasis supplied), as required by independent claim 1.

Second, even if the Examiner contends that the returned sintered material in Noda et al. is actually the “return fines of less than 4 mm in particle size in bin 5,” (column 3, lines 15-16), those return fines are apparently mixed with other materials in element 7, which appears to be a mixer, before being pelletized in primary disk pelletizer 8, (column 3, lines 13-23; Fig. 1). Thus, even if the Examiner contends that the return fines are in bin 5, those return fines are not added alone to the longitudinal extent of pelletizer 8, which the Examiner presumably contends is the equivalent in Noda et al. of the granulation drum of independent claim 1, during a pelletizing or granulation process, as required by independent claim 1. Instead, the return fines in bin 5 are mixed with “[c]oarse particle iron ore in bins 1 and 2, fine pellet feed in bin 3, serpentine as flux in bin 4, ... and burnt lime as a binder in bin 6,” (column 3, lines 13-16), by presumed mixer 7 and only such mixture is fed to primary disk pelletizer 8, (see Fig. 1).

In the Advisory Action, the Examiner states, in part, that, “[i]n the 103 rejection, Noda was only used to ‘specifically’ show that it is know [sic] to return fines directly back into a ‘pelletizer,’ or granulation-type device. Regardless of the teachings of Noda, Komatsu fully discloses the argued limitations of Claim 1. To reiterate, Komatsu specifically teaches that the returned sintered material is added after the primary mixer. This returned material is also added to the secondary mixer (granulation-type device) within the longitudinal extent, as stated in the prior Office Action,” (Advisory Action, page 2, lines 2-6).

As stated in the Amendment filed in the above-captioned application on January 7, 2009, the Derwent abstract of Komatsu et al. enclosed with the Office Action mailed on October 7, 2008 indicates that the “mixed material is mixed with returned ore at the inlet side of a sec. mixer,” (Basic-Abstract, lines 4-5), (Amendment filed on January 7, 2009, page 7, lines 3-5). The Examiner appears to agree with the Derwent abstract in stating that “Komatsu teaches that the returned ore (as stated above) is mixed with the premixed ore, addition, and binder at the inlet side of a second mixer, where granulation takes place. The fact that the mixture takes place at the inlet side of the second mixer allows the mixture to take place right before or sometime during granulation,” (Office Action mailed on October 7, 2008, page 4, third paragraph, lines 2-6; emphasis supplied).

In contrast, independent claim 1, as amended, provides that some of the returned sintered material is added alone within a longitudinal extent of the granulation drum during the granulation process. Komatsu teaches away from such an addition alone of returned sintered material during the granulation process since it teaches that the returned ore is mixed with the premixed ore, addition, and binder at the inlet side of the second mixer before granulation takes place.

Claim 2 has been canceled, without prejudice or disclaimer, as being redundant to amended independent claim 1 from which it depends. Claim 4 has been amended to be consistent with amended claim 1. Antecedent basis for the amendment to claim 4 is found in the specification, for example, on page 9, lines 25-31.

Since each of claims 4 and 5 is directly dependent upon independent claim 1, each of claims 4 and 5 is allowable for at least the same reasons recited above with respect to the allowability of independent claim 1.

New claim 17 has been added based, in part, upon independent claim 1. However, new claim 17 provides that all of the returned sintered material is added alone within a longitudinal extent of the granulation drum during the granulation process. Antecedent basis for this claim is found in the specification, for example, on page 9, lines 25-29, and on page 10, lines 1-5, and in the drawings, for example, in Figs. 2 and 3.

New dependent claims 18 and 19 have also been added, based on claims 4 and 5, respectively, except that claims 18 and 19 are dependent upon new independent claim 17, instead of independent claim 1, and claim 18 differs from claim 4 in order to be consistent with claim 17 from which it depends.

In view of the foregoing remarks, allowance of claims 1, 4, 5, and 17-19 is respectfully requested, claims 7-16 being withdrawn from consideration.

Respectfully submitted,

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